Adaptille
Transforming Hoptille into an adaptable building

P5 presentation
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Introduction
Hoptille
Hoptille
Location

Bijlmerplein
Hoptille
Heesterveld
Hoptille
Relation to the highrise

Hoptille during construction (Stadsarchief Amsterdam, 1981)

Hoptille after construction (Stadsarchief Amsterdam, n.d.)
1981: Constructed

1984: First renovation

1993: Second renovation

Now: Technical problems
How could renovation, replacement and/or densification strengthen the qualities and help solve current problems without compromising heritage values and identities, where these exist?
Hoptille
Proposed transformation
Values and Challenges

What values are associated to the building?

What building elements need to be transformed to suit the needs of the current users?
Historical Value
Building analysis

Historical value is present in:
• Contrast from highrise
• Transition from high- to lowrise
• Protective wall
• Passages through building
• Interior corridor
Interviews
Method

Photo shown during interviews
### Findings

#### Interviews

<table>
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<tr>
<th>Aesthetic</th>
<th>Ecological</th>
<th>Use</th>
<th>Social</th>
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<td>Economical - Use</td>
<td>Dwelling size</td>
<td>Emotional</td>
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#### Midrise

**Shops close by**
- Amenities

**Financial - Use**

Male, age 40-59, Resident Hoptille:

"However he likes the placement of Hoptille near the centre and the shops at Bijlmerplein as well as the green in the area."

**Technical issues**

Stairs
- Built environment

Male, age 20-39, resident Bijlmerplein:

"He thinks that the stairs at Hoptille are very impractical, because the houses are not accessible for the elderly. In his opinion they should just add elevators to the building."

**Circulation**

Male, age 40-59, Community Police Officer:

"It’s a nice neighbourhood, just every now and then there is a shooting." – volunteer at the Handreiking

**Crime**

- Safety

**Social**

- Safety

Times mentioned: 6
<table>
<thead>
<tr>
<th>Values</th>
<th>Conclusion Subquestion 1</th>
<th>“What values are associated to the building?”</th>
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<tr>
<td><strong>Ecological</strong></td>
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<td>Greenery</td>
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<td>Large houses</td>
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<td><strong>Social</strong></td>
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<td>Anti-bijlmer</td>
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<td>• Midrise</td>
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<td>• Material</td>
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<td>• Horizontality</td>
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<td>• Diversity</td>
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- **Greenery in between high rise**
- **Nearby shops at Bijlmerplein**
- **Activities at de Handreiking**
- **Hoptille (Stadsarchief Amsterdam, n.d.)**
"What building elements need to be adapted to suit the needs of the current users?"

Challenges

Aesthetic
- Midrise
- Facades
- Colours
- Lack of openness
- Exterior stairs

Use
- Technical issues
  - Heating
  - Ventilation
  - Noise
- Circulation
  - Lack of accessibility
  - Lack of overview

Social
- Crime & Unsafe feeling
  - Passages
  - Circulation
- Lack of social interaction
  - Lack of meeting spaces

North-east facade
Exterior staircases
Passage
Design Interventions

How can an 1980’s apartment building be transformed to become adaptable while maintaining the associated values?
1. Circulation
Values
Historic
• Interior corridor

Challenges
Social
• Safety

Use
• Lack of accessibility
• Lack of overview

2. Passages
Values
Historic
• Transition

Ecological
• Greenery

Challenges
Social
• Safety

3. Meeting Spaces
Values
Historic
• Facade character

Social
• Community

Challenges
Use
• Lack of interaction

4. Housing Units
Values
Social
• Recognizable

Ecological
• Embodied energy

Challenges
Use
• House size

Use
• Technical issues

5. Facades
Values
Social
• Community

Aesthetic
• Lack of openness

Challenges
Use
• Technical issues
Design Interventions

1. Circulation
2. Passages
3. Meeting Spaces
4. Housing Units
5. Facades
1. Circulation

Renovations

2nd floor - 1980

2nd floor - 1984

3rd floor - 1984

3rd floor - 1993
1. Circulation

Current problem

Current situation

Proposed intervention
1. Circulation

Design proposal

Interior corridor

Circulation system
1. Circulation

Interior corridor

Lighting

Section corridor
1. Circulation
Communal balconies

Section balconies

South-west facade
Design Interventions

1. Circulation
2. Passages
3. Meeting Spaces
4. Housing Units
5. Facades
2. Passages
Connecting neighbourhood
No view into the passages (own photos)
2. Passages
Lack of overview

Current situation
Ground floor

Proposed intervention
Ground floor
2. Passages

Lack of light

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<th>Current situation</th>
<th>Proposed intervention</th>
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2. Passages

Design proposal

- Add volume on ground floor
- Remove volume above passage
- Add public functions
Design Interventions

1. Circulation
2. Passages
3. Meeting Spaces
4. Housing Units
5. Facades
3. Meeting Spaces

Literature

**TWELVE URBAN QUALITY CRITERIA**

**Protection**
- Protection against traffic and accidents: Do groups across age and ability experience traffic safety in the public space? Can one safely bike and walk without fear of being hit by a driver?
- Protection against harm by others: Is the public space perceived to be safe both day and night? Are there people and activities at all hours of the day because the area has, for example, both residents and offices? Does the lighting provide safety at night as well as a good atmosphere?

**Comort**
- Options for mobility: Is this space accessible? Are there physical elements that might limit or enhance personal mobility in the form of walking, using a wheelchair, or pushing a stroller? Is it evident how to move through the space without having to take an illegal detour?
- Options for seeing: Are seating options placed so there are interesting things to look at?
- Options for talking and listening/ hearing: Is it possible to have a conversation here? Is it evident that you have the option to sit together and have a conversation?
- Options for play, exercise, and activities: Is the public space and the building that surrounds it at a human scale? If people are at the edges of the space, can we still relate to them as people or are they lost in their surroundings?
- Opportunities to enjoy the positive aspects of climate: Are local climatic aspects such as wind and sun taken into account? Are there varied conditions for spending time in public spaces at different times of the year? If this is in mind, where are the seating options placed? Are they located entirely in the shadows or the sun? And how are they orientated/ located in relation to wind? Are they protected?

**Enjoyment**
- Scale: Is the public space beautiful? But it is evident that there is good design both in terms of how things are shaped, as well as their durability?
- Experience of aesthetic qualities: Are there good primary seating options such as benches or chairs? Or is there only secondary seating such as a stair, seat wall, or the edge of a planter? Are there adequate non-commercial seating options so that sitting does not require spending money?
- Options for sitting: Are there good primary seating options such as benches or chairs? Or is there only secondary seating such as a stair, seat wall, or the edge of a planter? Are there adequate non-commercial seating options so that sitting does not require spending money?
- Options for standing and lingering: Are there good primary seating options such as benches or chairs? Or is there only secondary seating such as a stair, seat wall, or the edge of a planter? Are there adequate non-commercial seating options so that sitting does not require spending money?
- Options for play, exercise, and activities: Are there options to be active at multiple times of the day and year?

**+ Protection against traffic**

- - Protection against harm by others
- - Options to stand and linger
- - Options for sitting
- - Options for talking and listening
- - Options for play, exercise, and activities

Twelve Quality Criteria (Gehl Institute, n.d.)
3. Meeting Spaces

Private- and publicness
3. Meeting Spaces

Functions

Community centre
Vegetable garden

Flexible space
Square

Health facility
Mini forest

Sports facility
Playground

Working space
Wadi

Laundromat
Field

Cafe
3. Meeting Spaces
Experimenting

Experiments public function
3. Meeting Spaces

Cafe

South-east facade
Design Interventions

1. Circulation
2. Passages
3. Meeting Spaces
4. Housing Units
5. Facades
4. Housing Units

Target groups

Current residents

Target groups Amsterdam
4. Housing Units

Urban Analysis

Accessibility (adapted from Gemeente Amsterdam, n.d.)
4. Housing Units

Case studies

**Solid**
Stadgenoot

- Permanent shafts
- Loadbearing facades

**ERA flats**
Smits Vastgoedzorg & Era Contour

- Large units in regular grid

**Résidence pour chercheurs**
Lacaton & Vassal

- Regular grid of columns
- Winter balconies added

**Expandable House**
Urban Rural Systems

- Expandable housing by adding units

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Solid oud-west (Schröder, n.d.)

[Image: Artist impression ERAflat Purmerhoek (A3 Architecten, n.d.)]

Résidence pour chercheurs (Lacaton & Vassal, 2013)

[Image: Expandable House (Putra, 2018)]
4. Housing Units

Structure

Ground floor

3.6 m

4.8 m
4. Housing Units

**Findings**

### SUPER Local
**Heem wonen**

Superlocal (IBA, n.d.)
Demolishment building A (Superlocal, n.d.)
Materials used from nearby demolition
Multiple ways of recycling material tested

### Circle House
**Lerjerbo**

Modular building system (GXN Innovation, 2018)
Completely demountable house
Limited amount of elements with which many different design can be made

### Temporary Courthouse
**cepezed**

Demountable floor system (cepezed, n.d., p.14)
Designed to be temporary
Completely demountable and reusable

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**Notes:**
- Demountable floor system: 1. Install hollow core slab to beam post
- 2. Apply DEMU anchors
- 3. Pour concrete into slots and fix hollow core slab to SFB beam using (adjustable) bolts
- Outfitting: ensemble of the setup of the building
- Consists of an adaptable generic construction and a outer skin of prefabricated, demountable elements and an outfitting which is custom-built and replaceable.

**Materials:**
- Materials used from nearby demolition
- Multiple ways of recycling material tested
- Completely demountable and reusable

**Design:**
- Designed to be temporary
- Completely demountable and reusable
4. Housing Units

Adding corridor

Step 1
4. Housing Units
Adding connections

Step 2
4. Housing Units

Adding floorspace

Step 3
4. Housing Units

Design sessions

Sketched layouts design sessions
4. Housing Units
Options
4. Housing Units
Changes
4. Housing Units
Changes
4. Housing Units

Changes
4. Housing Units

Changes
4. Housing Units

Changes
4. Housing Units
Changes
Design Interventions

1. Circulation
2. Passages
3. Meeting Spaces
4. Housing Units
5. Facades
5. Facades

North-east facade:
- Less diversity
- Relief
- Grid

South-west facade:
- More diversity
- Vertical concrete slabs
- Round and rectangular balconies
5. Facades

Elevations

Current North-east facade

Proposed North-east facade

Proposed South-west facade
5. Facades
Panel Options
5. Facades
Details
Current housing stock by year of construction (CBS, 2020)
“Problem is that often the arguments behind such massive demolitions are not at all sustained by lifespan consciousness (ecological values). They are said to be sustained by social values, but in reality they are either sustained in profit (economic values) or power (political values)”

- Ana Pereira Roders, 2007
“Age and adaptivity is what makes a building come to be loved. The building learns from it’s occupants and they learn from it.”

- Stewart Brand, 1997
Adaptability

1. Use
2. Climate adaptation
3. Values
4. Transferability
Create framework for adaptability

1. Circulation
2. Passages
3. Meeting Spaces

Add flexible elements

4. Housing Units
5. Facades
Increasing amount of flexibility

1. Passages
2. Circulation
3. Meeting Spaces
4. Connecting Units
5. Facades

Shearing layers of Change (Brand, S. 1994)
1. Use
Levels of flexibility

- Structure: 70-100 years
- Services: 15-25 years
- Secondary Structure: 50-60 years
- Skin: 25-40 years
- Flexible panels: 5-25 years
Adaptability

1. Use
2. Climate adaptation
3. Values
4. Transferability
2. Climate adaptation

Climate system

- Solar panels
- Buffer-zone
- Water storage
- Thermal energy storage
- Natural ventilation corridor
- Floor-heating
- Floor-cooling

Summer

Winter
2. Climate adaptation

Energy use

Current:
- poor insulation
- outdated and leaking climate control systems

Proposed:
- buffer-zone
- added insulation
- added solar panels
- thermal energy storage
- floor-heating

Future:
- added solar panels
- more sustainable installations
Adaptability

1. Use
2. Climate adaptation
3. Values
4. Transferability
3. Values

Value assessment

- ADDING FLOORSPACE
- CHANGE CIRCULATION
- COMMEMORATIVE
- AESTHETIC
- ECONOMIC

- OLD NEW INCREASED VALUE REDUCED VALUE

- SOCIAL
- HISTORICAL
- NEWNES
- USE

- FLEXIBILITY IN FLOORPLAN
- ADD MEETING SPACES
- CHANGE PASSAGES

HIGH RISK
Adaptability

1. Use
2. Climate adaptation
3. Values
4. Transferability
### 4. Transferability

**Method**

**How can an 1980’s apartment building be transformed to become adaptable while maintaining the associated values?**

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<td>What values are associated to the building?</td>
<td>Interviews Building analysis</td>
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<td>What building elements need to be transformed to suit the needs of the current users?</td>
<td>Interviews Literature</td>
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<td>2</td>
<td>How can the building become more adaptable to future changes?</td>
<td>Building analysis Case studies</td>
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<td>3</td>
<td>How can Hoptille be transformed to become adaptable while maintaining its values?</td>
<td>Experimenting and testing</td>
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4. Transferability

Heesterveld - current situation

Heesterveld - with interior corridor and added buffer-zone
4. Transferability

Heesterveld

Heesterveld - current situation

Heesterveld - with added buffer-zone
Adaptille
Transforming Hoptille into an adaptable building


Gehl Institute. (n.d.). Twelve Urban Quality Criteria [Illustration]. In Twelve Quality Criteria (p. 3).


Stadsarchief Amsterdam. (1981, April 14). Luchtfoto Bijlmer Centrum [Photograph]. Beeldbank. https://archief.amsterdam/beeldbank/detail/7ce17901-803c-0910-0f0a-2e20037c5b2d/media/55c79e9-4ca1-1c8f-0a5c-6258d47b42b7?mode=detail&view=horizontal&q=bijlmer&rows=1&page=278
